released. Setting $\alpha = 0.01$ does not appear to appreciably increase this probability (second black curve from the right).

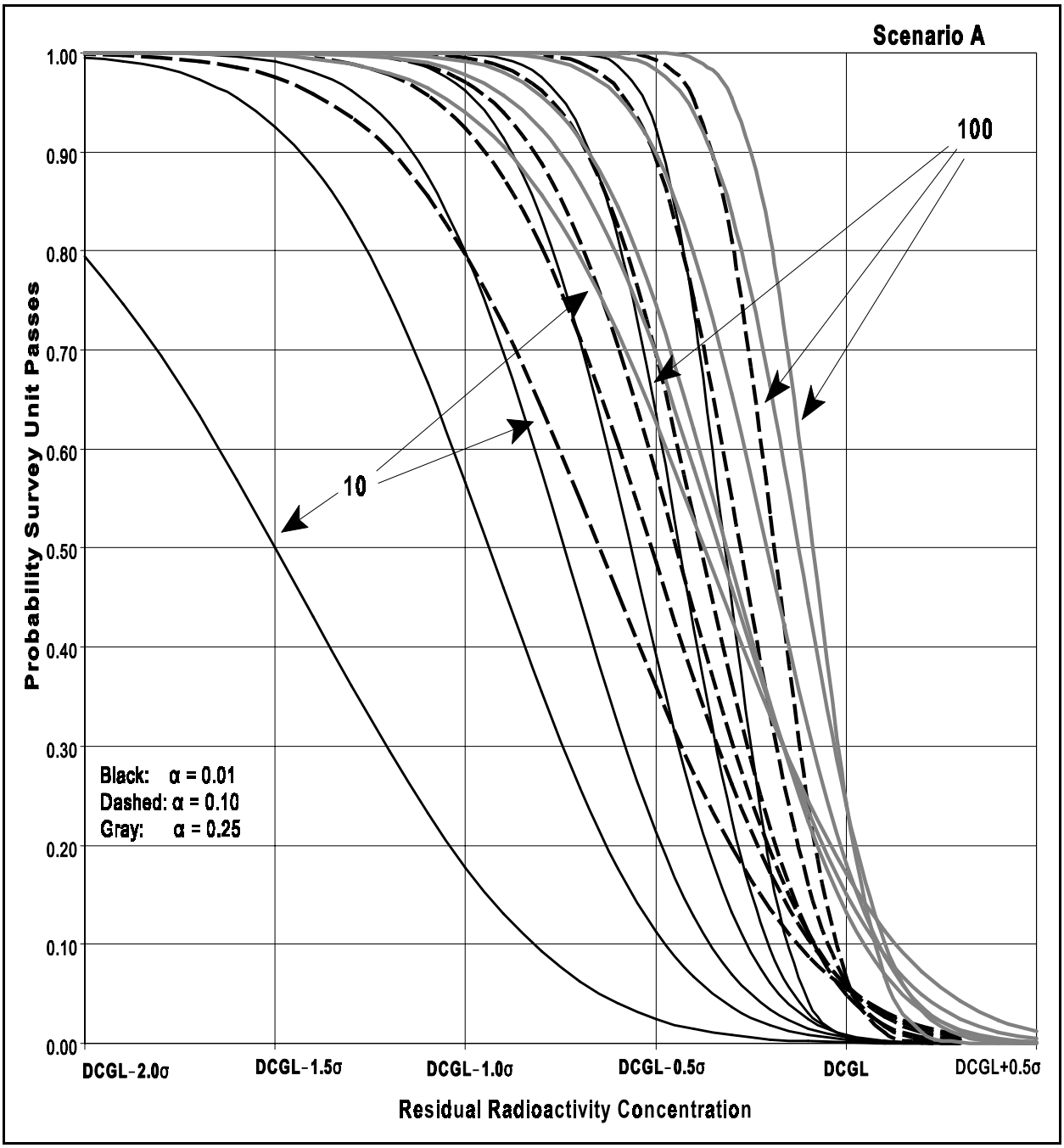

Figure 3.9 Probability a Survey Unit Is Released Using the Sign Test Under Scenario A

Using these figures, the probability that the survey unit passes over the entire range of possible residual radioactivity values, can be compared to the DQOs as expressed, for example, in Figure 3.5. In this way, the sample design can be optimized, taking into account the risks and costs associated with a decision error. The construction of the curves is discussed further in Chapter 10.

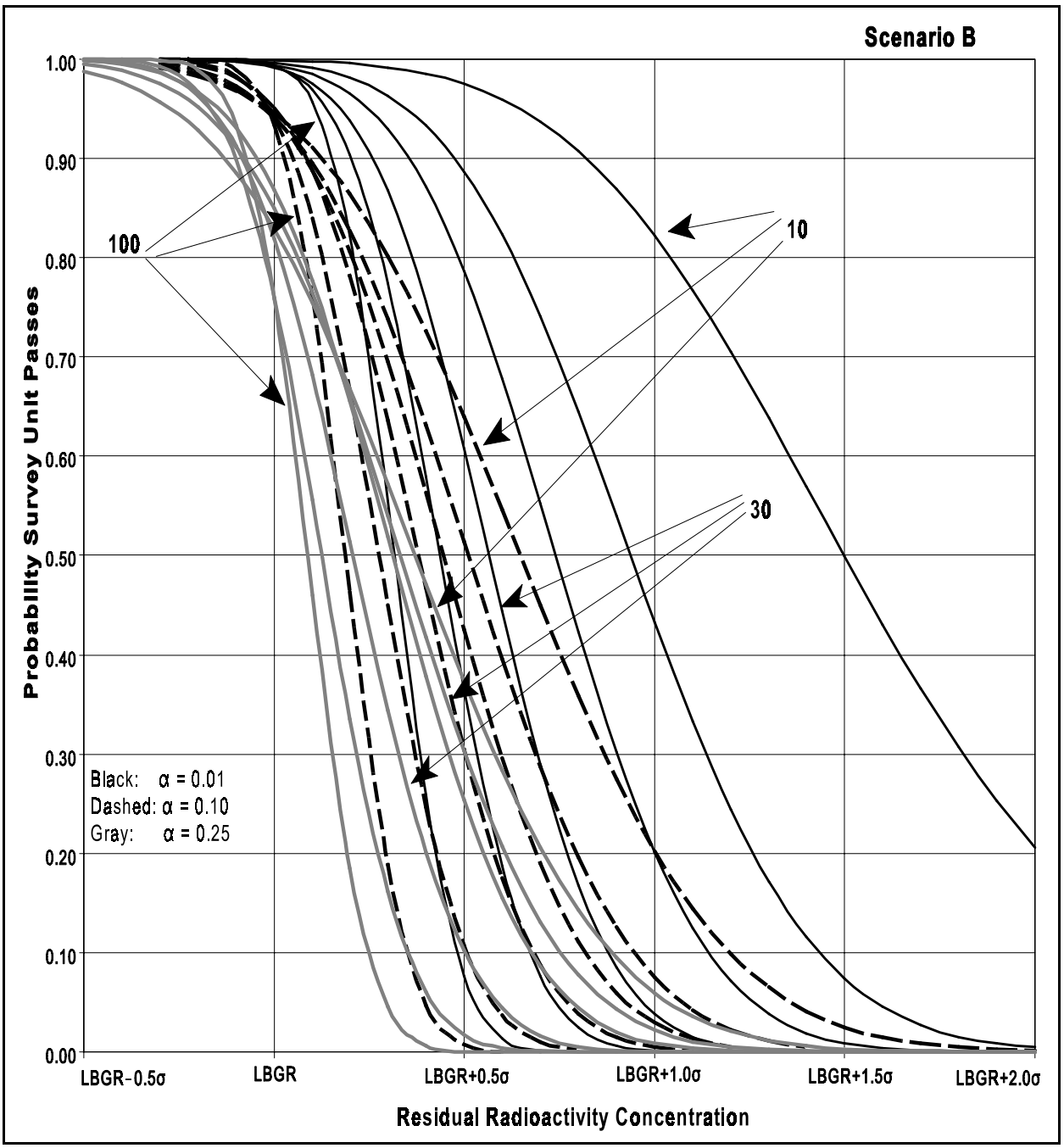

Figure 3.10 Probability a Survey Unit Is Released Using the Sign Test Under Scenario B

3.8.2 Optimizing the Design for Detecting Elevated Areas

As discussed in Section 2.2, one objective of the final status survey is to provide reasonable assurance that there are no small areas of elevated residual radioactivity left within the survey unit that might cause the release criterion to be exceeded. However, it is inefficient to treat all survey units equally in this regard. During the process of survey unit classification, Class 1 survey units are identified as those with the potential for such elevated areas. Measurements and